



# GROUND WATER RULE SUMMARY

## NH Department of Environmental Services

### Drinking Water and Groundwater Bureau

**This summary is intended to provide public water systems an introductory overview of the Ground Water Rule (GWR).** The Department of Environmental Services proposed rules are designated Env-Dw 717. The rules, summary, and any further information can be found at our website [www.des.nh.gov](http://www.des.nh.gov). From the “A-Z” link on the top right, select “Drinking Water and Groundwater Bureau.” In our home page, select “Education/Outreach” from the column on the right.

This rule:

- Applies to all public water systems (PWS) using groundwater, including systems receiving their water from other systems using groundwater (i.e. consecutive systems). It may also include PWSs using both groundwater and surface water *unless* the PWS is subject to the surface water treatment rule, Env-Ws 380.
- Requires:
  - Investigative monitoring for all groundwater systems (GWS) currently disinfecting or wishing to stop disinfection.
  - Triggered source monitoring when there is a total coliform-positive sample in the distribution system.
  - Compliance monitoring where 4-log treatment is conducted.
  - Corrective action for any PWS with a significant deficiency or contaminated source water.

#### **Investigative Monitoring (IM)**

- Required of GWSs providing disinfection (e.g. chlorination, ozone, or UV treatment), including those adding chlorine for oxidation to support another treatment process (e.g. Arsenic removal) **UNLESS** meeting 4-log treatment & conducting compliance monitoring as outlined below.
- Requires six months of *E. coli* monitoring from **March to August 2009** from each source.
- To determine if *E. coli* is present in GWS source water and if it is ‘masked’ by current disinfection process. Allows disinfecting systems to continue without additional GWR monitoring and reporting if IM shows that source water is free from *E. coli* contamination, and future bacteria samples are clean.
- Samples should be analyzed via the Colilert MPN test at a certified lab. (DES laboratory cost of \$20)
- A positive *E. coli* detection will require the system to institute a boil order, public notice, and corrective action of contaminated source(s).

(After demonstrating that your source water is not contaminated, you will be subject to the triggered monitoring requirements *if* you are notified of a total coliform-positive sample collected under routine total coliform rule (TCR) bacteria monitoring, after November 30, 2009.)

#### **Triggered Monitoring**

- Required of all systems not providing 4-log treatment, **after November 30, 2009**, who are notified of a total coliform-positive sample collected under routine TCR bacteria monitoring
- Monitoring required at all sources active at the time the positive TCR sample was collected. Source sample(s) must be taken in conjunction with repeat samples within 24 hours & tested for *E. coli*.
- To determine if *E. coli* is present in PWS source water and whether corrective action is needed.
- Samples should be analyzed via the Colilert MPN test. (Cost of \$20 at the DES laboratory).
- *E. coli* detection will require the system to institute a boil order, public notice, and the collection of five additional sourced water samples and/or corrective action within an established time frame set by DES.

#### **4-Log Treatment**

- Treatment of viruses (using inactivation, removal, or a DES-approved combination of 4-log virus inactivation or removal) before or at the first customer that kills 99.99 percent (4-log) of the pathogens.
- Assures that the treated water is adequately treated for microbial contamination.

- Owner must **submit engineering, operational, and complete information by October 1, 2009**. DES will review and evaluate the process and establish specific monitoring parameters. DWGB's approval of the consultant's design is required.
- If you chlorinate, an analysis based on detention time and chlorine residual must be performed to demonstrate 4-log treatment is met. (Chlorination is the most practical method for small systems.)

(After demonstrating that 4-log treatment is met, you will be required to meet compliance monitoring criteria, see below, and report on a regular basis. You will not be subject to triggered monitoring requirements).

### **Compliance Monitoring**

- Required of all systems who have demonstrated that their disinfection process meets the criteria for 4-log treatment. (Triggered monitoring does not apply)
- To demonstrate that 4-log treatment is being met on a continuous basis.
- DES will establish a specific monitoring schedule depending on disinfectant process used.
- If the established residual level or treatment criteria are not met, DES and the public must be notified of the treatment failure and the treatment must be fixed.
- Requires daily monitoring of chlorine residual (or other alternate parameters)
  - Continuous monitoring required for systems serving greater than 3,300 people
  - Grab samples (or continuous) for systems serving less than 3,300 people
- Requires daily recordkeeping and monthly reporting to DES.

### **Sanitary Surveys** (This is not a new requirement)

- Required at all community PWS (at three-year intervals) and non-community PWS (five-year intervals) as presently conducted.
- All significant deficiencies need to be addressed within 120 days or other corrective action would be required (see below).

### **Corrective Action**

- Required where there is confirmed *E coli* in the source or unresolved significant deficiencies.
- Corrective action options:
  - Correct all significant deficiencies
    - Consult with state within 30 days
    - Complete corrective action or corrective action plan and schedule within 120 days
  - Provide an alternate source of water (on a permanent basis)
    - Requires compliance with DWGB well siting rules
  - Eliminate the source of contamination
  - Provide treatment for 4-log virus removal at contaminated sources (see above)

### **Required Notices to the Public**

- Public notification after violation issuance.
- Consumer Confidence Report – Yearly for community systems with added language if GWR violation.
- Special Notice of fecal contamination of groundwater and outstanding significant deficiencies.
  - Community systems
  - Non-community systems

### **Contacts**

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